

CLAIM AMENDMENTS:

Claims 1-12 (cancelled)

13. (currently amended) An inductive coupling circuit for information signal transmission in electric energy distribution grids and disposed within a transmission path, the transmission path having a shielded power cable with a power cable conductor, the circuit comprising:

an inductive coupling device having a ring that encloses the shielded power cable, and a coil inductively coupled to said ring and connected to a transceiver unit, wherein a current of a superposed information signal in the power cable conductor flows through a plane defined by said inductive coupling device; and

an earth wire disposed upstream of said plane defined by said inductive coupling, said earth wire connected to the power cable shield and to earth or to a potential compensation, wherein no net current flows in the shield, since there is no conductive connection from one side of said plane to an other side of said plane, other than through said plane itself, and wherein, during transmission, current of an information signal is directly induced into the conductor and, during reception, only current within the conductor is evaluated ~~The inductive coupling circuit of claim 9, wherein all inductive coupling devices are linked to a same phase in a transmission path having several underground cables.~~

14. (currently amended) An inductive coupling circuit for information transmission in electric energy distribution grids, the grids having a shielded power cable having a power cable conductor, the circuit being located within a transmission path, the circuit comprising:

an inductive coupling device having a ring which encloses the shielded power cable and a coil inductively coupled to said ring and connected to a transceiver unit; and
an earth wire connected to the power cable shield and to earth or to a potential compensation, the earth wire being lead back through the ring core, wherein current of a superposed information signal in the power cable conductor, a return current and/or induced interference signals on the shield as well as an identical return current and/or induced interference signals flow through a plane defined by said inductive coupling device in opposite directions, wherein magnetic fields of interfering currents are compensated, said inductive coupling device inducing current directly into the conductor when transmitting and only evaluating current in the conductor when receiving.~~The inductive coupling circuit of claim 10, wherein all inductive coupling devices are linked to a same phase in a transmission path having several underground cables.~~

15. (currently amended) An inductive coupling circuit for information signal transmission in electric energy distribution grids and disposed within a transmission path, the transmission path having a shielded power cable with a power cable conductor, the circuit comprising:

an inductive coupling device having a ring that encloses the shielded power cable, and a coil inductively coupled to said ring and connected to a transceiver unit, wherein a current of a superposed information signal in the power cable conductor flows through a plane defined by said inductive coupling device; and

an earth wire disposed upstream of said plane defined by said inductive coupling, said earth wire connected to the power cable shield and to earth or to a potential compensation, wherein no net current flows in the shield, since there is no conductive connection from one side of said plane to an other side of said plane, other than through said plane itself, and wherein, during transmission, current of an information signal is directly induced into the conductor and, during reception, only current within the conductor is evaluated~~The inductive coupling circuit of claim 9, wherein said inductive coupling device is linked to all phases.~~

16. (currently amended) An inductive coupling circuit for information transmission in electric energy distribution grids, the grids having a shielded power cable having a power cable conductor, the circuit being located within a transmission path, the circuit comprising:

an inductive coupling device having a ring which encloses the shielded power cable and a coil inductively coupled to said ring and connected to a transceiver unit; and
an earth wire connected to the power cable shield and to earth or to a potential compensation, the earth wire being lead back through the ring core, wherein current of a superposed information signal in the power cable conductor, a return current and/or induced interference signals on the shield as well as an identical return current and/or induced interference signals flow through a plane defined by said inductive coupling device in opposite directions, wherein magnetic fields of interfering currents are compensated, said inductive coupling device inducing current directly into the conductor when transmitting and only evaluating current in the conductor when receiving~~The inductive coupling circuit of~~

~~claim 10~~, wherein said inductive coupling device is linked to all phases.

17. (currently amended) An inductive coupling circuit for information signal transmission in electric energy distribution grids and disposed within a transmission path, the transmission path having a shielded power cable with a power cable conductor, the circuit comprising:

an inductive coupling device having a ring that encloses the shielded power cable, and a coil inductively coupled to said ring and connected to a transceiver unit, wherein a current of a superposed information signal in the power cable conductor flows through a plane defined by said inductive coupling device; and

an earth wire disposed upstream of said plane defined by said inductive coupling, said earth wire connected to the power cable shield and to earth or to a potential compensation, wherein no net current flows in the shield, since there is no conductive connection from one side of said plane to an other side of said plane, other than through said plane itself, and wherein, during transmission, current of an information signal is directly induced into the conductor and, during reception, only current within the conductor is evaluated ~~The inductive coupling circuit of claim 9, wherein said inductive coupling device is linked to an incoming line of an transformer.~~

18. (currently amended) An inductive coupling circuit for information transmission in electric energy distribution grids, the grids having a shielded power cable having a power cable conductor, the circuit being located within a transmission path, the circuit comprising:

an inductive coupling device having a ring which encloses the shielded power cable and a coil inductively coupled to said ring and connected to a transceiver unit; and
an earth wire connected to the power cable shield and to earth or to a potential compensation, the earth wire being lead back through the ring core, wherein current of a superposed information signal in the power cable conductor, a return current and/or induced interference signals on the shield as well as an identical return current and/or induced interference signals flow through a plane defined by said inductive coupling device in opposite directions, wherein magnetic fields of interfering currents are compensated, said inductive coupling device inducing current directly into the conductor when transmitting and only evaluating current in the conductor when receiving ~~The inductive coupling circuit of claim 10,~~ wherein said inductive coupling device is linked to an incoming line of an transformer.

19. cancelled.

20. cancelled.

21. (new) The inductive coupling circuit of claim 13, wherein said inductive coupling device is located in a transformer station and said ring is a ring core or a plastic ring with a wrapped coil.

22. (new) The inductive coupling circuit of claim 14, wherein said inductive coupling device is located in a transformer station and said ring is a ring core or a plastic ring with a wrapped coil.

23. (new) The inductive coupling circuit of claim 15, wherein said inductive coupling device is located in a transformer station and said ring is a ring core or a plastic ring with a wrapped coil.
24. (new) The inductive coupling circuit of claim 16, wherein said inductive coupling device is located in a transformer station and said ring is a ring core or a plastic ring with a wrapped coil.
25. (new) The inductive coupling circuit of claim 17, wherein said inductive coupling device is located in a transformer station and said ring is a ring core or a plastic ring with a wrapped coil.
26. (new) The inductive coupling circuit of claim 18, wherein said inductive coupling device is located in a transformer station and said ring is a ring core or a plastic ring with a wrapped coil.